

REMARKS

Claims 1-6, 9-20, and 23-38 were rejected in the Office Action dated April 19, 2007. Claims 1, 15, 30, and 33 have been amended. Claims 4, 18, and 35 have been canceled. No new matter has been introduced by any amendments.

Claims Rejections under 35 USC § 103

A. Claims 1, 15 and 30

Claims 1, 15, and 30 stand rejected in the above-captioned office action under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,601,181 issued to Thomas ("Thomas") in view of US Patent No. 6,954,864 issued to Schelling ("Schelling").

Amended claim 1 recites a method, in particular: in an apparatus, a method of operation comprising:

powering the apparatus from a backup power source, in response to the apparatus being in an AC absence condition;

initiating, by an Operating System of the apparatus in response to the apparatus being in the AC absence condition, a suspend to memory process to place the apparatus in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the apparatus is in the suspended to memory state including suspension of all data transmissions;

setting, by a BIOS of the apparatus upon the initiation of the suspend to memory process, a timer to initiate waking up of the apparatus after a period of time and to facilitate shutting off the backup power source; and

canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus.

Thomas discloses a UPS system and method which allows a computing device to be suspended to either memory or disk sustained by backup power in the event of an AC power failure. Upon resumption of AC power, Thomas sets a timer and does not resume the device until the timer expires. The purpose is to make sure that AC power is stable and that the backup power supply is sufficiently re-charged to handle another AC power failure before resuming (see Summary of the Invention).

On page 4 of the above-captioned Office Action, column 8, lines 35-40 are cited as part of the rejection of claims 4, 9, 18, and 34 as disclosing “canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus”. However, that text of Thomas discloses that the timer of Thomas is canceled in response to AC Power failure, not in response to AC being re-present as required by claim 1. Thus, Applicants submit that Thomas fails to disclose this required limitation of claim 1.

Further, Schelling fails to disclose the deficiency of Thomas. Schelling describes a computer system that may be placed into a low power state by a remote management device even if the OS is not fully functional. It does not describe “canceling, by the BIOS, the timer as part of a resume process initiated in response to AC being re-present at the apparatus” as required by claim 1.

Also, there could have been no suggestion to modify Thomas to achieve the method of claim 1. The purpose of Thomas, as discussed above, is to make sure that AC power is stable and that the backup power supply is sufficiently re-charged to handle another AC power failure before resuming the apparatus. Thus, a timer is set upon resumption of AC power and the device is not resumed before the timer expires. If the system detects another AC power failure during this time, it cancels the timer and awaits for resumption of AC power (see figure 5 and column 8, lines 35-40 of Thomas). If the timer of Thomas was canceled as part of a resume initiated as part of a re-presence of AC power, as in claim 1, the device would never resume thereby defeating the purpose of Thomas. Thus, Thomas teaches away from “canceling, by the BIOS, the timer as part of a resume process initiated in response to AC being re-present at the apparatus” as required by claim 1.

Therefore, because neither Thomas nor Schelling teach or suggest each and every element of claim 1, Applicants submit that claim 1 is nonobvious and therefore patentable over the combination of Thomas and Schelling. Claims 15 and 30 contain in substance the same limitations as claim 1. Thus, for at least the same reasons, Applicants submit that claims 15 and 30 are also patentable over the combination.

B. Claims 2-6, 9-14, 16-20, 23-29, and 32-38

In the above-captioned office action, claims 2-6, 9-14, 16-20, 23-29, and 32-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Thomas in view of Schelling in further view of US Patent No. 7,131,011 issued to Westerinen et al. (“Westerinen”).

Applicants submit that Westerinen fails to remedy the deficiencies of Thomas and Schelling. Westerinen discloses a computer system with backup that is capable of preserving a persistent state of a computer if AC power failure occurs while the system is suspended to memory. In particular, Westerinen is cited for disclosing that a BIOS can set a timer of a Real Time Clock (RTC). However, it does not disclose “canceling, by the BIOS, the timer as part of a resume process initiated in response to AC being re-present at the apparatus” as required by claims 2-3, 5-6, and 9-14 each incorporating the limitations of claim 1. Thus, the combination of Thomas, Schelling, and Westerinen fails to teach or suggest all limitations. Therefore, for at least these reasons, Applicants submit that these claims are patentable over the combination.

Further, claims 16-17, 19-20, and 23-29 depend from claim 15 which Applicants submit, for at least the same reasons discussed above, is also patentable over the combination. Therefore, Applicants submit claims 16-17, 19-20, and 23-29 are also patentable over the combination. Also, claim 32 depends from claim 30, incorporating its limitations. Thus, for at least the same reasons, Applicants submit that claim 32 is patentable over the combination.

Independent claim 33 contains in substance the same limitations as claim 1 and claims 34 and 36-38 depend from claim 33 incorporating its limitations. Thus, for at least the same reasons discussed above, Applicants submit that claims 33-34 and 36-38 are patentable over the combination.

Claims 4, 18, and 35 have been canceled rendering their rejections moot. Claim 31 is not specifically discussed in the above-captioned Office Action, but Applicants submit that it is also patentable over the combination by virtue of its dependence on claim 30.

C. Claim 5

Notwithstanding the above, Applicants submit the following additional reason for the allowability of claim 5. Claim 5 recites the method of claim 2, wherein:

the method further comprises the RTC initiating waking of the apparatus, after passing of the period of time, including as part of waking of the apparatus, the basic input/output system (BIOS) causing the backup power source to be shut off, transitioning the apparatus to an un-powered state instead.

As discussed above, Thomas discloses a UPS system and method which allows a computing device to be suspended to either to memory or to disk sustained by backup power in the event of an AC power failure. To accomplish this, Thomas sets a timer and does not resume the device until the expiration of the timer. Once the timer expires, the device is resumed and is powered by AC power. Applicants submit that this is the exact opposite of “transitioning the apparatus to an un-powered state instead” upon expiration of the timer as required by claim 5. Applicants therefore submit that Thomas fails to teach or suggest each and every element of claim 5 and in fact teaches away from this limitation. Because Schelling and Westerinen also fail to teach or suggest this limitation, Applicants submit that claim 5, for at least this additional reason, is nonobvious and therefore patentable over the combination.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that all pending claims are in condition for allowance. Entry of the amendments and early issuance of Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,
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